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Newsletter

Volume 30

March 1996

Number 1

ADMINISTRATOR'S MESSAGE:

The recent flood activity has tested many local and state plans. The overall response has been excellent with many people at all levels of emergency management, volunteers and government doing their best to help. Six local DES Coordinators and Deputy Coordinators assisted other counties or the state office in the Emergency Operations Center (EOC). For the first time, several state and federal agencies also supplied individuals to assist in EOC's. Many good ideas have been identified to improve response activities in the future and we will be asking many of you for your input into these changes.

We are currently moving forward with establishing the Disaster Field Office (DFO) in Missoula. The recovery operations will take at least several months, depending on the weather. I invite you to stop in and tour the DFO if you happen to be in the area. Recovery operations are often the most difficult part of a disaster as expectations by individuals vary greatly following a Presidential Disaster Declaration. The next few months will be challenging, rewarding and educational.

Thanks to all who participated and helped with the Governor's Conference. It was very successful considering the flooding situation, but the content and information were

well-received by those who participated.

The potential for flooding remains high in many areas of the state and may continue through June. As we prepare for future flooding and recover from the past floods, we are still moving forward with our usual day-to-day work plan activities. These are exciting times and we look forward to working with all of you this spring.

Congratulations to James Lee Witt for being elevated to a cabinet level position. This is a great honor and reflection on the way FEMA is working with states.

Jim Greene



Major General Prendergast Says: "Thanks"

For a Job Well Done!

(from "The Arsenal Magazine", Department of
Military Affairs, March 1996, Volume 2 Issue 2)

*These two agencies assisted local
and state official handle the dra-
matic chain of events...*

When I left Helena for Washington, D.C. on February 4, 1996, the temperature was -30 degrees. But, even on this early morning flight, I was already told we may have an emergency on our door step.

The record cold temperatures of the two weeks prior to the flooding of February belied the effects a 100 degree shift in temperature would have on the state of Montana during my week away from home. I first received word of the flooding while I was still in the nation's capital. I returned to Helena on Thursday to a full-fledged disaster.

I am very proud of the way the Department of Military Affairs handled this crisis. The people from the National Guard and Disaster and Emergency Services Division responded to the situation with professionalism and dedication. The National Guard and DES should be very proud of their service to the people of the Treasure State during this time of crisis.

I would especially like to recognize: Jim Greene, Jim Anderson, Larry Akers and the entire staff from DES. From the National Guard a special thanks goes to MAJ Loren Oelkers, CPT Scott Smith, SFC Terry Young, SFC Robert Kuntz and the over 400 women and men of the Montana National Guard who were called up for this vitally important duty.

Your dedication to serving the state of Montana is greatly appreciated by Governor Marc Racicot and me. You have performed your duties in the true spirit of the National Guard. I salute your service to the people of Montana.



FROM THE EDITOR:

Spring will be soon upon us. And with it comes changes in the weather. In this newsletter are articles on lightning and wild fires that I thought would be of interest to our customers.

Thanks to everyone who submitted articles. Those who contributed to this edition of the newsletter are: Larry Akers, Fred Cowie, Chris Christensen, Bob Fry, Jim Greene, Gina Loss, Bob Mussleman, Fred Naeher, Wilma Puich, Deb Ranum, Paul Spengler, Bill Thomas and Monique Lay.

Special thanks to Monique Lay for formatting, reviewing, publishing and mailing the newsletter.

The electronic age is here. The editor would be most grateful if articles could be put on a disk using WordPerfect version 5.1 or higher. We will return the disk! You can also e-mail articles to the addresses listed on page 13.

Thanks for your help!

Deadline for the Summer, 1996 issue of the DES Newsletter is May 15, 1996.

Fred Naeher








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Fact or Fallacy?

Test your knowledge of lightning: (answers and explanations are on page 7 of this newsletter)

-  *If it's not raining, then there's no danger from lightning:* **Fact or Fallacy?**
-  *People struck by lightning carry an electrical charge and should not be touched:* **Fact or Fallacy?**
-  *The rubber soles of shoes or rubber tires on a car will not protect you from being struck by lightning:* **Fact or Fallacy?**
-  *"Heat lightning" occurs after very hot summer days and poses a serious threat, particularly to the nation's forests and grasslands:* **Fact or Fallacy?**
-  *Lightning never strikes twice:* **Fact or Fallacy?**

District I News:

There has recently been a flurry of activity in District 1 regarding acquisition and outfitting of mobile command posts: Madison County (John Allhands, Coordinator) has acquired a used Winnebago which is being outfitted with assistance of the U.S. Forest Service (cell phones will be installed); Lincoln Co. RFD bought a large command post which will be outfitted with input from the Lincoln Co. Emergency Management Agency (Bill Kemp, Coordinator); Glacier National Airport has a van, the interior of which is being designed with assistance from Kim Potter, DES Director; Granite County (Jim Kelly, Coordinator) has acquired a used ambulance which will be equipped as funds permit; Missoula County (Bill Silverman, Coordinator) has refurbished their mobile command post.

Bill Thomas
DES District I Rep

District III News:

Mike Bohne is the new coordinator for Bighorn County. Mike is an EMT working half-time for the Bighorn County Ambulance. Mike originally came from Livingston and was a volunteer firefighter for Park County RFD#1. I worked with him quite a bit while he was in Livingston and am very pleased to see him join the emergency management arena. Mike has a background as an instructor and is trained to operations level in hazardous material response. I believe he will be an excellent coordinator for Bighorn County. Alan Hanson is now working only as a paramedic for Bighorn County. He is hoping to remain on as a deputy coordinator for the County.

INCIDENT COMMAND SYSTEM WORKING TEAM

The ICS working team is having a work session on March 4th at 9 a.m. at the Park County courthouse in Livingston. We will be reviewing the Operations section of the Montana Incident Command Teams draft material for task books and Field Operations Guides. We will also be looking at second drafts on the other sections. We are hoping to come out of this meeting with a final draft to review, at which time we will be looking to frame the material as either task books or into a FOG to be used by local jurisdictions. Once this is agreed on we will be looking for funding to print copies for distribution. If all goes well we will be talking about a time line for distribution and I will keep everyone informed what that will be.

Bob Fry
District III DES Rep

From the desk of: Wilma Puich

Butte/Silver Bow DES
Secretary, MACo

Congratulations to Ms. Deb Ranum, the DES Coordinator for Fallon and Prairie Counties. Mr. Paul Spengler, outgoing President of the Association of Disaster and Emergency Services, awarded Ms. Ranum the 1996 President's Award.

The award is presented to an Association member every two years who has best displayed outstanding service to emergency service programs. Ms. Ranum has served as a member of the Association Executive Board, President of the District Four DES Coordinators, was one of the first in the state to complete the Federal Emergency Management Agency Professional Development Series,

served as an assistant to the Flathead County DES Coordinator during the 1995 wildfire season, has recently assumed the role of DES Coordinator for both Prairie and Fallon Counties and has attended the Emergency Management Institute in Emmitsburg, Maryland.

Charlie Hanson, Liberty and Toole County DES Coordinator, took the podium as the Montana Association of DES Coordinators' new president. Charlie urged the membership to continue to build on the Association-State partnership through the District concept.

The membership elected other new officers for the 1996-1998 term: Vice President-Butch Renders; Secretary/Treasurer-Wilma Puich; District Vice Presidents: District I-Bill Silverman, District II-Tootie Marks, District III-Mary Jo Svalina, District IV-Curtis Petrik.

Outgoing officers awarded
plaques for their
years of service

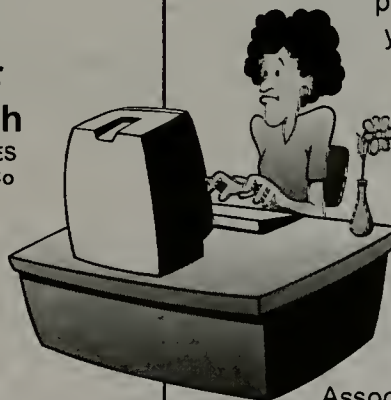
were Kim Potter-
2/78-2/96; Jim
King 2/94-2/96;
Carole Raymond
2/94-2/96; and
Alan Hanson
2/94-2/96.

Recognized by
Governor Marc
Racicot for the

Association were Art
Zody, Dawson County

and Mick Mills, Lincoln County who
both retired after years of service to
the program and the Association.

President Hanson presented outgoing President Paul Spengler with a watch and plaque for his four years of service as the President and for the commendable job he did representing the Association.



Fallon & Prairie County DES

THANK YOU

Mick Mills, once told me "When you are not prepared to speak, to speak from your heart", I found that even my heart can be speechless.

However, I would like to thank the past president, Paul Spengler and the Montana DES Association for honoring me with the President's Award at the Governor's Conference.

I would also like to thank Jim Greene and the State Staff for the training and the opportunities that I have received through my employment, the Federal Emergency Management Agency for the training I received while attending EMI and through the Independent Study Courses, and all of the Coordinators and Deputies throughout the State of Montana for your assistance, encouragement and support. Everyone of you have contributed to my success in receiving this award.

Deb Ranum



State Training Officer

ANNUAL TRAINING NEEDS ASSESSMENT

The annual Training Needs Assessment was sent out to local DES Coordinators February 8th, 1996.

This annual assessment of training needs in Montana forms the foundation for next year's training program. Please ensure these surveys are returned on or before March 15th, 1996. The Training Advisory Committee will use them in their meeting on March 21st, 1996.

The draft '97 training calendar, based upon the Training Needs Assessment, will be out in time for the development of the '97 SOWs (Statement of Work).

Chris Christensen



National Weather Service

Howdy! Having become a "member" of the DES team recently, I've been asked to introduce myself to you. I'm Gina Loss, and though you'll find my desk amongst those of DES, I'm actually a meteorologist with the National Weather Service. I moved into the DES office last October when the Helena Weather Service Office closed its doors. I've been with the Weather Service in Helena more than 10 years now (did I say 10??), and am familiar with many of you already, especially those in southwest Montana. I've always enjoyed providing weather information to the public, especially during severe weather. Now, serving as a liaison between the Weather Service and Helena, and the many agencies located in the Capital City, I'm enjoying my job just as much, and sometimes more! In addition to the varied responsibilities of a liaison, I provide weather services to DES during critical situations, and work closely with Lynn Valtinson, the Warning Coordination Meteorologist in our forecast office in Great Falls, on various projects. I will be assisting Lynn through the spring as we go out and provide spotter training to the counties under our umbrella of responsibility. Along the way, I will be stopping in to visit with many of you. This will be an opportunity for us to catch up on personnel changes, technological changes, or anything else you might want to discuss. I look forward to seeing you!

Gina Loss



PIZZA PROJECT

The National Weather Service and Disaster and Emergency Services have joined up in a public outreach project to provide weather safety information to many folks we may not reach through other avenues. We have approached many pizza restaurants across central Montana with the idea of the restaurants printing up the information provided by NWS/DES with their regular flyers and coupons. These flyers are commonly attached to the pizza delivery boxes. We're very happy to announce that Bob's Pizza Plus in Great Falls has already agreed to join us in this project! The first flyer will provide a variety of information on Floods and Flash Floods, including a bit of trivia on Montana floods. Larry Akers provided lists of the pizza restaurants to local DES officials in central Montana. If you received a list, please take a few minutes to visit with the managers of those restaurants and encourage them to join in. If you know of any pizza restaurants that were not included, let us know ... we'll be happy to get information on the project to them. We'll only be successful in this effort with your help!

STATE MITIGATION OFFICER
Dam Safety Exercise Design:

One of the most catastrophic man-made disasters that Montana faces is a dam failure. Many of you reading this article may face a similar tragedy. When Montana began to analyze what could be done to better prepare or to mitigate such an event, it became obvious that training and exercising were imperative. We discovered that we had local emergency managers who knew little about the dams in their jurisdictions. Likewise, some dam personnel were not aware of the local emergency management system. With local, State, Federal and privately owned dams, we found a variety of preparedness levels reflected in dam emergency action plans (EAP's).

Starting with FEMA's Exercise Design G-120 materials, Montana developed its own Dam Exercise Design Course. Actually, our modification of the course was minimal, but we did tailor the student audience to take full advantage of the course. We required a "Team Concept". As a minimum, the teams consisted of the local dam person, his or her local emergency manager and a representative from the county Sheriff's office. There are key personnel in any dam failure response or exercise in Montana. In some cases, the County Commissioners and other elected officials became so interested they also attended.

One example of the coordination and participation was a large contingency from the Confederated Salish and Kootenai Tribes' emergency response organization. As in any G-120 course, each team prepared two exercises and received one. During the three day course, the teams worked independently on their own time and reviewed their EAP's and designed exercises to implement when they returned home.

The training and the enthusiasm of the students made this a very rewarding experience. These courses have served as the vehicle to establish many bonds which could in turn save lives, reduce human suffering and protect property. If you would like more information on this course, please call Larry Akers at 406-444-6911.

Larry Akers



LEWIS AND CLARK COUNTY:

"Shaker '96"

A brand new, state of the art earthquake mitigation and recovery exercise was conducted January 18, 1996 in the Lewis and Clark County Emergency Operations Center. "Shaker 96" is an exercise for high level decision makers from county and city government, elected officials and representatives from the private sector and volunteer agencies.

After the Loma Prieta earthquake of 1989, hazard analysts across the county had questions regarding the recovery phase in the post event environment. The Federal Emergency Management Agency recognized a need and resounded with a grant to the National Science Foundation. The Spengle Corp of California was selected to research and develop a realistic, post event exercise, to better prepare those local governments located in high hazard earthquake areas across the country. One of the many attributes to the developed product is that the players develop the scenario as their first task during the exercise. This first task lends realism to the rest of the day's activities. The "Egg Timer" becomes the player's enemy, as many complicated and long range decisions must be made in a relative short period of time.

This exercise did not reflect the intense political heat surrounding earthquake recovery. Players need to imagine the political context in their community as they are working the exercise. Political issues pervade every task. After earthquakes, local governments commonly enjoy a brief suspension of political rivalry. Distinctions between the responsibilities of public and private agencies, federal, state and local governments, and city and county government departments may blur. Every organization and person will be working together to address their common needs.

This exercise introduced a series of interrelated tasks that local governments almost always face after an earthquake. By going through the exercise, local officials gained solid information, pertaining directly to their jurisdictions, about the process of recovery and rebuilding and how to reduce potential hazards. The exercise gave them the important advantage of forethought when they face the inevitable earthquake, enabling them to help their communities recover and rebuild quickly and effectively.

The exercise was very well attended by city and county officials. Sixteen areas of concern were identified and are currently being addressed. This program will be available from the State Disaster and Emergency Services Division, Earthquake Program Manager Call Fred Naeher at 406-444-6911.

For more information contact: Paul Spengler @ 406-447-8285 or Bob Musselman 406-449-6868

Paul Spengler
Bob Musselman



SAFETY CORNER:

Do you use a cell-phone while you are driving?

By the Editor, adapted with permission from USAA Magazine, March, 1996, USAA, San Antonio, Texas 1995.

As I drive around Helena wondering why people drive the way they do, I have noticed a common thread in erratic driving behavior: car-phones. When I see cars drift across lanes, run stop signs and red lights, ignore yield signs and pedestrian cross walks, I think they are either intoxicated, talking on their car-phone or perhaps both. Here is some information for you:

Brazil has banned car phones, except for the hands-free style. A bill calling for the same law in Illinois failed to pass in the legislature. Several states, including Massachusetts, are studying if car phones are safe for use while driving. A lobbying group that represents cellular phone companies says education, not legislation, is the key. "Cellular phone users just need to use common sense". A preliminary study done at the Rochester Institute of Technology in New York found that having a cellular phone in a car increased the risk of being involved in an accident by 34%. However, other studies have shown the increased risk is minimal. "Talking on the cellular phone is no more distracting than talking to other people in the car and less distracting than changing a tape in the tape player" according to a spokesperson for the Cellular Telecommunications Industry. "(And) when I go riding down the road, I see people...reading a book."

Here a few common sense tips from the February/March, 1996 issue of USAA Magazine:

- Preprogram often used phone numbers. Most phone will store 99 phone numbers
- Select a phone system that offers the fewest distractions- a hands free model
- Practice using your telephone while the car is parked
- Let voice mail answer your calls when it's unsafe or inconvenient for you to answer
- If you know the call is going to be long or intense, pull off the road
- You can only fully concentrate on one thing at one time and driving is a full time job

Fred Naeher

Next issue: Cell Phone etiquette



Hazardous Materials Program Manager

TRANSCAER® Co-coordinator Named

Fred Cowie, HazMat Program Manager for MTDES has been appointed Montana Co-Coordinator for TRANSCAER®, the Chemical Manufacturers Association's national partnership program for areas without chemical facilities, but which are affected by the transportation of chemicals. The program "provides assistance for communities to develop and evaluate their emergency response plan for hazardous materials transportation incidents." Fred comments that "the goals of TRANSCAER®, the EPA, the SERC and MTDES are the same for these communities, preparedness!" He expects to work closely with Lou Wagner of Union Pacific, the Task Group Chairman for TRANSCAER®.

Rohm and Haas Safety Train to Visit Montana

Steve van Rensselaer and Cal Tobias of Rohm and Haas will conduct a series of training events in conjunction with the visit of the Rohm and Haas Safety Train to Polson. The Confederated Salish and Kootenai Tribes are hosting the visit of the Safety Train to the Indian Nations and Local Communities HazMat Conference. While here, the Safety Train will also be used to train fire personnel in conjunction with the SERC's development of the State HazMat Team concept, as well as reservation-related response personnel and railroad HazMat technicians.

ATSDR Releases Study Findings

The ATSDR (pronounced A-T-S-D-R), the Agency for Toxic Substances and Disease Registry, of the US Department of Health and Human Services, has done a study of eleven states over four years and their analysis reveals the following information:

- Most accidents (93%) involve a release of only one chemical
- Most incidents (84%) occur at facilities [obviously the eleven states had lots of facilities]
- Industry responders (58% of victims) are more likely to be injured than citizens or responders [probably related to the use of facility-dominated states]
- Most of the employees injured (73%) used no PPE (personal protective equipment)
- Most common injuries - respiratory (31%) & eye irritation (16%)
- Most commonly released are volatile organic compounds, herbicides and acids
- Most injuries caused by less common releases of more highly toxic substances (for example, chlorine involved in 3% of releases, but caused 32% of injuries)

For more information: Irene Hall, Ph.D., ATSDR, 1600 Clifton Road, NE, Mailstop E31, Atlanta, Georgia, 30333; phone (404) 639-6203; e-mail: ixhl@atsdr2.cdc.gov.

Fred Cowie



Answers for: *Fact or Fallacy?*

If it's not raining, then there's no danger from lightning.

Fallacy. Lightning often strikes outside of heavy rain and can occur tens of miles away from any rainfall. This was the case with Steve Marshburn, Sr., president and founder of Lightning Strike and Electric Shock Victims International.

Marshburn, who was an assistant vice president at a bank, was struck on a *sunny* day in 1969. He was sitting at a driveup teller window *inside* the bank and not a drop of rain had fallen from the sky.

People struck by lightning carry an electrical charge and should not be touched.

Fallacy. Lightning-strike victims carry no electrical charge and should be attended to immediately. Contact your local American Red Cross chapter for information on CPR and first-aid classes.

The rubber soles of shoes or rubber tires on a car will not protect you from being struck by lightning.

Fact. Rubber-soled shoes and rubber tires do not provide protection from lightning. But a metal-roofed vehicle does offer some protection as long as you're not touching any metal. Although you may be injured if lightning strikes your car, you are much safer *inside* a vehicle than outside. Here's another tip: Roll up the car windows. If wet, they can also help conduct electricity to the ground.

"Heat lightning" occurs after very hot summer days and poses a serious threat, particularly to the nation's forests and grasslands.

Fact. What is referred to as "heat lightning" is actually lightning from a thunderstorm too far away for thunder to be heard. This is the phenomena behind some 15,000 lightning-induced fires, primarily in the western United States and Alaska. And, as Marshburn proves, such lightning can be especially dangerous not only for property, but for people.

Lightning never strikes twice.

Fallacy. Lightning most often strikes the highest thing

around. The Sears Tower and the Empire State Building for example, have been hit thousands of times. And even though pilots avoid flying directly through thunderstorms, commercial airplanes average two lightning strikes a year. Lightning usually follows the plane's metal skin back into the air, doing little or no damage. According to the National Safety Council, only one aircraft is known to have crashed because of lightning.

For information about Lightning Strike and Electric Shock Victims International, a non-profit organization founded in 1989, write to 214 Canterbury Road, Jacksonville, North Carolina 28540-5307. Scot Severn is among the organization's 431 members, along with golfer Lee Trevino, who was struck by lightning on an Illinois golf course.

"Where Home Meets Wildland"

by Herbert E. McLean, USAA magazine

Five hot tips for homeowners on the edge:

The 1994 wildfire season may have been the darkest in U.S. history. Fire fighters responded to 74,000 wildfires that burned four million acres of wildland. The price tag? *One billion dollars.*

Last year's season also ranked as one of the worst in terms of lives lost: twenty-eight men and women were killed trying to keep the nation's forest fires under control. July 6 was a particular bad day for fire fighters in Colorado: It was the day 14 of them died in the South Canyon Fire on Storm King Mountain.

Today's fires, and the trauma they cause, occur at the most critical point in modern wildfire battleground, the so called urban-forest interface, where home meets wildland. I call it the "wildfire interface." Here in the woods and brush lands, humankind and nature come clashing.

Often located close to our western national forests, and just as often tree hidden in the mode of Thoreau's Walden, these "wildfire interface" homes now number in the millions. The California Department of Forestry estimates that 1.5 million homes are at risk, not including any within city limits, as in fire ravaged Oakland. Oregon's Department of Forestry, a leader in pinpointing wildfire sensitive areas, estimates that 187,000 homes could be affected in that state.

Paradoxically, these places in paradise can instantly be transformed into eloquent, charred statements of our ignorance about nature - particularly about the behavior of fire. Conversely, these same homes can fuel major for-

est fires, as when weekenders head home without extinguishing their barbecue coals.

**No state is immune to wild fire,
as residents of even
Texas and Florida can attest.**

The wood shakes and shingles we pile on our abodes? During wildfires, nature treats them like kindling, as embers rain on our roofs.

The dense, cooling trees close around our places? Fire treats them as welcome mats leading directly to our homes.

Our narrow, sylvan driveways? Suddenly they're a natural, oxygen high route for fire to follow and a sure turnoff to fire fighters.

Fortunately, people who live where homes border wild-land can, if they know where to look, acquire the know-how to substantially increase their chances of saving themselves and their homes. My visits to a dozen wild-fire scenes over the past 10 years confirm undeniably that homeowners who take preventive measures buy an "insurance policy" no company can match.

If I didn't believe that, I wouldn't have spent several thousand dollars to replace my cedar-shake roof with an attractive steel one here on Orcas Island, Washington. And at our summer in California's Stanislaus National forest, we installed highly readable signs showing our name and lot number. We also removed three potential "torch" trees close to the cabin, started an ongoing program to trim flammable, dead limbs ("ladder fuels") from our older trees, and annually maintain 30 or more feet of "defensive space" by raking dry pine needles down to mineral soil.

Distilling information from a major research effort throughout the West, and drawing on experience with our own neighborhood fire protection program, here are five cutting edge tips for protecting your home.

1. Get up to speed: The National Fire Protection Association, the U.S. Forest Service and state forestry departments have excellent printed materials and videos. Some publications worth reading:

- **Fire Safe Inside and Out-** a full color brochure on home protection from the California Department of

Forestry, 1416 9th Street, Attn: CDF Office of Fire Prevention, 16th floor, Sacramento, CA 95814

- **Defensible Space**, a folder on protective landscaping from any office of the U.S. Forest Service or the National Park Service.
- **Home Protection Guide**, a 32-page step-by step booklet from the agencies previously mentioned.
- **Protecting Your Home from Wildfire**, an outstanding 24-page illustrated guide from the National Fire Protection Association, One Batterymarch Park, Quincy, MA 02269-9101.
- **Protecting Your Home And Family From Wildfires**, a free brochure (booklet 546) from The USAA Foundation. Other booklets available are "Surviving A Natural Disaster" (booklet 524) and "Home and Auto Security" (booklet 522). Call 1-800-531-6161.

2. Tool up. Creating your home's defensive space means providing at least 30 feet of clear space around your home and 100 or more feet downhill. (Lawns, of course, are OK; dense shrubbery and foliage are not.) Obviously you're trading aesthetics for survival, but not necessarily because you want to. In California, you're required by law to do so.

Rakes, shovels, long-handled limb saws (with a 10-foot extension) and plenty of garden hose (at least a couple hundred feet) are the tools of choice for most homeowners. More specialized equipment, including tools used by fire fighters, are also available for cutting your own firebreaks or escape trails.

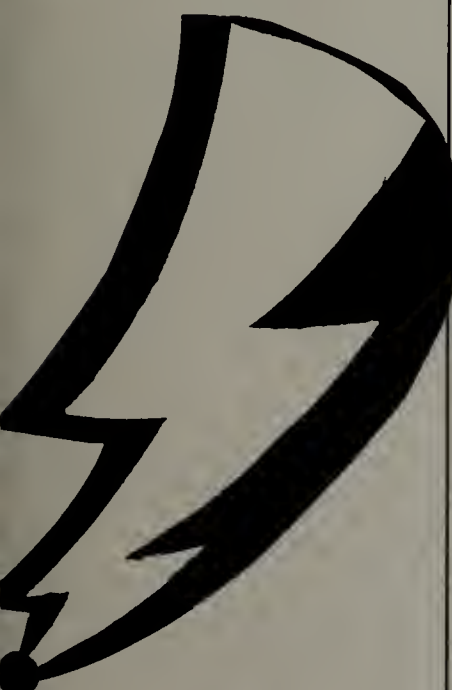
3. Tune in. A hand-held radio scanner, which receives police and radio frequencies, gives instant, specific wildfire information from local fire fighters and sheriff's deputies, plus the latest weather report. If you smell smoke or hear sirens during fire season, turn on your scanner to find out where the fire is and if you should evacuate.

4. Foam your home. Foam is now being used with surprising success by wildfire fighters. Several units are currently on the market and show good potential for homeowners as well. Using cylinders that pressurize water and a concentrate to produce high-energy foam, you can cover your entire house within minutes, then evacuate if necessary. Your home will look like it's wearing a coat of shaving cream, but you'll have major protection for a limited time. (Note: Using this equipment requires special training so don't "foam home" without it!)

5. Put first things

first. No amount of high-tech equipment will save your home if you don't put first things first. To come out winning you must:

- ▶ Get rid of your wood shake or shingle roof (or siding), and replace it with a steel or composition roof rated Class A (will not burn) or Class B (slightly less protective). No exceptions.
- ▶ Follow fire-safe guidelines and aggressively reduce or eliminate any shrubbery that would act as fuel in your yard and along your driveway.
- ▶ Be sure your community has roads that are clear of vegetation (within 20 or more feet of either side) to act as a firebreak and to permit safe evacuation and access by firefighting equipment. This will also help prevent traffic accidents by improving visibility when smoke pours in and motorists are in a hurry.



☆☆☆Against all odds☆☆☆

U.S. serviceman struck by lightning

The sweat on Scot Severn's body instantly boiled, burning his skin. The incredible heat welded his dog tags together, melted his rain poncho, blasted a hole in his metal helmet and blew the ends out of his combat boots. And it wasn't even an act of war.

Twenty-one-year-old Severn, a specialist in the Army Reserves, was struck by lightning during his annual training with the 438th Field Artillery Battalion at Camp Grayling, Michigan. USAA member Tim Doudell had never met Severn, but he will never forget that fateful day in 1989 when a fast-moving thunderstorm brought tragedy to their field exercises. The bolt of lightning - one of the first to leap from the sky, says Doudell - hit Severn directly in the head and traveled throughout his entire body, paralyzing his limbs, puncturing his ear drums and burning 30 percent of his body. "I had seen men injured in other training accidents, but never anything like this," says the former Army captain. "His ears were literally blackened where the lightning had exited."

Doudell was among the artillerymen who performed cardiopulmonary resuscitation for 20 minutes in the driving rain to restore Severn's heartbeat. They succeeded.

The startling truth

Tornadoes may take out entire neighborhoods, and hurricanes may threaten whole states. But lightning, on average, kills more people every year than tornadoes and hurricanes combined.

According to the National Weather Service, lightning has killed an average of 89 people every year for the last 30 years. But that's only the beginning, since lightning deaths and injuries are grossly under reported, say experts, possibly by as much as 40 percent. Since coroners frequently rely upon news coverage of lightning-related accidents and data is often imprecise, a heart attack may be cited as the cause of death more often than lightning or electrocution.

Statistically, your chances of being hit by lightning are about 1 in 600,000. But in some parts of the country, the odds increase drastically. Florida - dubbed as the nation's "lightning capital" - sees three times as many strikes as the rest of the country. North Carolina is second in the number of lightning-related deaths and injuries.

Traveling at roughly the speed of light (186,000 miles per second), lightning heats the air in its path to more than 60,000 degrees Fahrenheit. The average bolt discharges roughly 10 to 30 million volts of electricity but can carry as much as 100 million volts, comparable to the voltage created by a small nuclear power plant. By contrast, the "third rail" that powers metro subway cars in Washington, D.C., carries 750 volts.

Protecting life and limb

According to Dr. David Rust of the National Severe Storms Laboratories, any storm should alarm you. While the mathematical odds of being hit by lightning on any given day are quite slim, they go up considerably if you're outdoors during a storm - even a storm with no apparent thunder and lightning. "Don't wait for lifeguards, park management, softball coaches or other officials to call a storm dangerous," says Rust, recalling the time his children were at a large water amusement park when it began to rain. "Park management actually handed out umbrellas with *metal handles* while the thunderstorm crackled overhead," he says.

If you are caught outside during a thunderstorm, holding an umbrella is basically the equivalent of holding a lightning rod. Here's your best defense when caught outdoors: Make yourself as small a target as possible. Crouch down with only your feet on the ground or, as Rust would say, "be a basketball with two feet." Forget the old maxim about lying down for protection (and other fallacies listed on page 7). Instead *minimize* your contact with the ground. That way, if lightning travels across the ground - as it did after Severn was struck - only your feet are in its path.

"When Scot was hit, three of us felt the ground strike from the same bolt," says Doudell. "I remember a sharp pain that went from my feet to my knees, and it even affected my vision momentarily. It was nothing too serious, but I definitely felt it."

Unlike Doudell, who has no long-term effects from his jolt, Severn is still in a wheelchair today. He also suffers from constant ringing in his ears.

Protecting home and hearth :

Buildings are also susceptible to lightning damage. Among the most precarious structures: buildings served by overhead electric lines; rural buildings in which residences are far apart and far from the electrical substation (because longer power lines offer greater exposure to lightning strikes); and buildings in flat, open spaces with no trees.

As Severn and Doudell can attest, lightning strikes are impossible to prevent. But protective devices that reduce the odds of fires, structural damage or power surges caused by lightning are available. While your homeowners or fire insurance policy will cover lightning damage, you may want to consider a lightning protection system if your home is on an exposed site or in a part of the country where there are frequent thunderstorms.

For the best protection against lightning damage, the Lightning Protection Institute recommends a system containing six major mechanical elements:

- ♦ *lightning rods* (also referred to as air terminals) a maximum of 20 feet apart on high points of the roof and projections;
- ♦ *main conductors* of heavy copper or aluminum cable interconnecting rods and grounds;
- ♦ *grounds* of at least one-half inch-diameter copper-clad rods sunk 10 feet deep in clay soil (special grounding may be required in sand, gravel or rocky soil);
- ♦ *bonds* connecting grounded metal objects to prevent side flashes;

- ♦ *lightning arresters* to protect wiring and appliances from surges following power lines;
- ♦ *tree protection* for any tree taller than the house or within ten feet of it.

The Lightning Protection Institute can supply you with the names of certified lightning protection system installers in your area of the country. For information, write to the Lightning Protection Institute, 3365 N. Arlington Heights Road, Suite J, Arlington Heights, Illinois 60004.



Did you Know?

(Reprinted from the Wisconsin Division of Emergency Government newsletter, February 1996)

The top ten chemicals ranked by Worst-Case disaster potential, according to the National Environmental Law Center/US Public Interest Research Group, "Nowhere to Hide", August 1995:

- | | |
|---------------------|---------------------|
| ■ Hydrogen chloride | ■ Chlorine |
| ■ Anhydrous ammonia | ■ Hydrogen fluoride |
| ■ Formaldehyde | ■ Phenol |
| ■ Sulfuric acid | ■ Ethylene oxide |
| ■ Phosphorus | ■ Chloroacetic acid |

RESOURCES: EMI Announces new Independent Study Course

The Federal Emergency Management Agency's Emergency Management Institute (EMI) recently announced a new EMI independent study course, IS-120: An Orientation to Community Disaster Exercises. This video-based instruction provides information about community disaster exercises and shows how a comprehensive exercise program contributes to a community's overall disaster preparedness. The course video describes different types of emergency management exercises and steps necessary to design them.

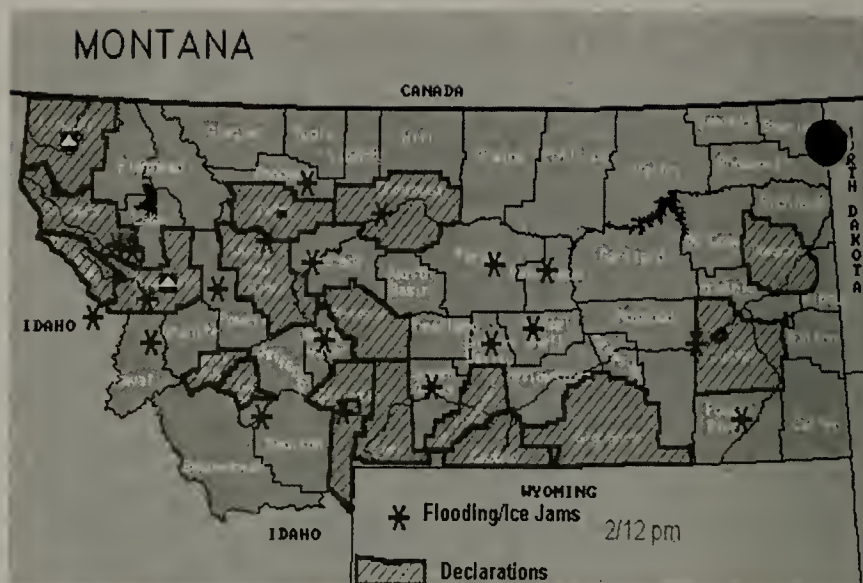
The target audience is state and local government personnel who need to know about emergency management exercises, but can not attend EMI's in-house Exercises Design Course-G120.

For more information: Sue Hernandez, EMI-Independent Study Office National Emergency Training Center, 16825 South Seton Avenue, Emmitsburg, Maryland 21727 or 301-447-1240.

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EIS at Work!!



**February 1996-Flower Creek
Damage at Libby, Montana**

February 1996-Lolo, Montana



EMERGENCY & DISASTER DECLARATIONS:

As of February 16, 1996 the following Montana Counties have declared states of emergency due to flooding:

Lincoln	Carbon	Dawson
Choteau	Stillwater	Custer
Lewis & Clark	Park	Gallatin
Bighorn	Teton	Silver Bow
Mineral		

The following Montana Cities have also declared states of emergency:

Missoula	Choteau	Livingston
Belgrade	Miles City	Bozeman
Libby	Plains	Boulder
Glendive		

The following have each issued disaster declarations:

Counties

Missoula Co	Deer Lodge Co	Sanders Co
Meagher Co		

The Cities of:

East Helena	Fort Benton	Thompson Falls
Hot Springs	Drummond	

As of February 16, the Red Cross sheltered 277 people since the beginning of the floods with 2,062 meals served.

The National Guard provided assistance to local authorities in enforcing road closures, evacuating homes, assisting law enforcement with patrolling, providing standby aircraft and crews for emergency evacuation.

Estimated damage is \$1,816,339.00.

The Montana Disaster and Emergency Services Newsletter is a quarterly publication of the Disaster and Emergency Services Division. It is funded, in part, by a grant from the Federal Emergency Management Agency.

Contributions of articles and ideas are welcome. 1996 deadlines for submission are May 15 for the June issue; August 14 for the September issue and November 13 for the December issue.

The editor reserves the right to edit for clarity and length. The articles in this newsletter do not constitute official policy. Questions regarding articles may be addressed to the DES Newsletter Editor, Fred Naeher, P.O. Box 4789, Helena, MT 59604-4789 phone 406-444-4911 or fax 406-444-6982 or e-mail: fnaeher@metnet.mt.gov or naeh2000@spacelink.msfc.nasa.gov

DISASTER FIELD OFFICE

A Disaster Field Office is now in operation in Missoula. The address is 2500 West Murphy Street, P.O. Box 5025, Missoula, Montana 59806. Phone: 406-542-0607 **Fax: 406-542-1720.

REPORTING-
USE WHAT WE HAVE

During the recent flooding, I had the opportunity to work the State EOC during the response phase. I observed a lot of very positive internal interaction as well as a great deal of communications and rapport between the state and local DES personnel. To have not been involved in this level of intensity since the 1986 floods, my overall comment is that we performed admirably. Many counties reported their situation accurately and quickly. One of our newest coordinators, Mr. Dave Bishop, is to be commended on this prompt and accurate reporting.

Overall, we could have done a better job of reporting. On two separate occasions, I recall writing letters to the field asking for reports. We have a source document in this state titled, "The Local Government Disaster Information Manual", (LGDIM). This document is the best I have seen. It contains well thought out and timely response and recovery advice and it contains many critical reports. The two reports in the initial response phase are the Situation Report and the Initial Damage Checklist.

The Situation Report, Tab D, LGDIM, should be filled out and transmitted as soon as you can. This form is our first indication of your status and forms the basis for our support to you. The Initial Damage Checklist, found in Tab E, LGDIM is designed to help you gather the information you need to assess your situation. The form itself, as well as the entire "Damage Assessment Handbook", is excellent (I wrote it)! It has helpful hints that will assist you in the data gathering process. It gives us that critical information to base our reports on and to determine if we need outside assistance such as FEMA.

While this disaster is still fresh on our minds please take time to look these report forms over. Make some copies, fill out the header now and be ready for the next time.

Larry Akers

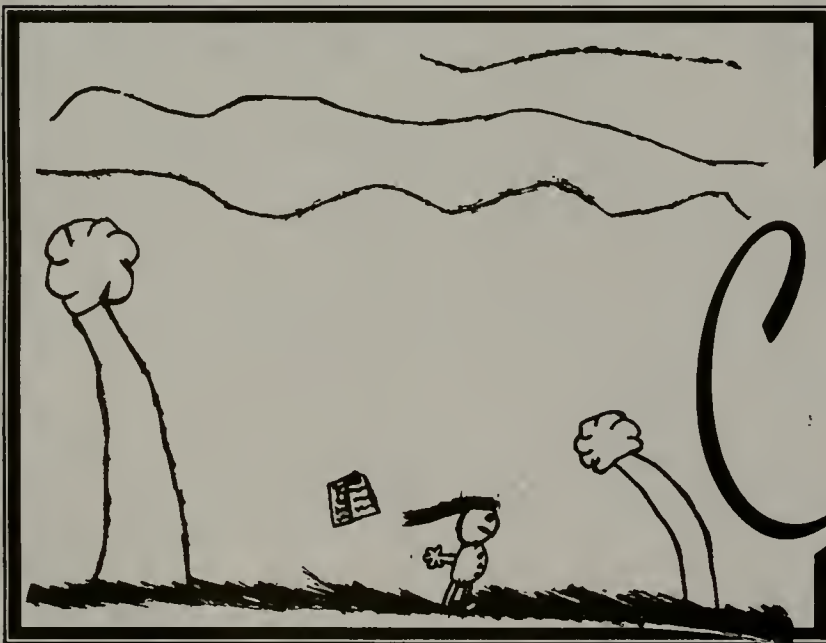


Disasters



Kaylene Murphy, Grade 3
Kessler School
Mrs. Holland, Teacher

Through the Eyes of



Kyrie Hoang, Grade 2
Smith School
Mrs. Mayer, Teacher

Children

Happy



Easter!





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